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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,394	11/25/2003	Richard Paul Eckberg	US 138361-1	9014

7590 05/15/2006

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EXAMINER	
BERMAN, SUSAN W	

ART UNIT	PAPER NUMBER
1711	

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/721,394	ECKBERG, RICHARD PAUL	
	Examiner	Art Unit	
	Susan W. Berman	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 March 2006*.

2a)☒ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/06/2006 has been entered.

Response to Amendment

Applicant points out that Eckberg et al teach epoxy-functional polysiloxanes having epoxy groups at positions along the polymer chain as well as in the chain-stopping positions and that Desorcie et al teach the same kinds of polysiloxanes. Applicant further argues that the instantly claimed epoxy-terminated silicone polymers have a preferred chainlength that is significantly less than taught by Eckberg et al. Applicant now claims compositions wherein the epoxy-functional polysiloxane has epoxy groups in the chain-stopping positions and "substantially no epoxy functional groups positioned along the silicone polymer". Applicant argues that the instantly claimed compositions provide unexpectedly stable photocurable compositions curable to adhesive coatings having unique release properties and release performance. Applicant further argues that Eckberg et al do not teach one-part shelf stable compositions.

These arguments are found unpersuasive for the following reasons.

Eckberg et al disclose polysiloxanes having as few as one epoxy-functional group along the polymer chain. In the disclosed formulas the subscripts g, h, k, l, n, p, u and z can each be zero. The subscript y for unit "D^E_y" can be any positive integer, including 1, 2, etc. Epoxy functional silicones taught by Eckberg et al wherein subscripts g, h, k, l, n, p, u and z are each zero and the subscript y for unit

"D^E_y" is a relativley small positive integer, such as 1, 2, etc., are considered to be encompassed by the instant claim language.

Applicant argues that the data in Tables 2, 3, 4 and 5 shows improved shelf stability for the instantly claimed compositions. Applicant argues that the shelf stability is a result of reduced crosslinking by crosslinking through chain-stopper groups only. The control example in the specification comprises a polysiloxane having numerous cycloaliphatic epoxy groups along the polymer chain. Eckberg et al disclose polysiloxanes having as few as one epoxy-functional group along the polymer chain. Therefore, the control example in the Tables is not considered to represent the closest teaching of Eckberg et al. The control example does not contain an alkylphenol compound (Desorcie et al's compatibilizer). Therefore, it is not clear whether the difference in shelf stability (lower viscosity build) is a result of differences in the epoxysiloxane component or in the absence or presence of an alkylphenol component. The alkylphenol compound would be expected to affect shelf stability in view of the teaching of Desorcie et al that it functions as a compatiblizer. In summary, the data presented is not persuasive because of the omission of the alkylphenol compound in the control composition and because the epoxypolysiloxane in the control composition has numerous epoxy groups along the polymer chain while Eckberg et al teach that any number of epoxy groups, including one or two, for instance, could be present along the polymer chain.

The data in Tables 7 and 9-11 show significant differences in stability of release between the examples according to the instantly claimed invention and the control example. However, the data is not persuasive with respect to the cited prior art for the same reasons set forth above.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-23 rejected under 35 U.S.C. 103(a) as being obvious over Eckberg et al (5,814,679) in view of Desorcie et al (5,010,118). Eckberg et al ('679) disclose co-photocuring carbinol-functionalized silicones and epoxy-functionalized silicones to provide improved release properties to release compositions and superior photocurability. Eckberg et al teach that the carbinol-containing silicones provide a lower release force coating (column 10, lines 1-5). Viscosities of the disclosed epoxy silicones range from 100 to 100,000 cstk and viscosities of the disclosed carbinol-containing silicones ranging from 300-15450 cstk are taught (column 3, lines 15-19 and Table 1). Thus Eckberg et al disclose compositions wherein the viscosities of the epoxy silicone and the carbinol silicone encompass those in the instant claims. Table 12 discloses compositions wherein the epoxy silicone has the formula $M^{E}D_{25}M^{E}$. The addition of the silicone carbinol is said to eliminate the zippy character of the tight release rendering the release properties both tight and smooth (column 21, lines 20-24). The compositions disclosed comprise the same iodonium salts as instantly claimed (column 13, lines 21-39). The differences from the instantly claimed compositions are that the epoxy-functionalized silicones are not limited to those having "substantially no epoxy functional groups positioned along the backbone of the silicone polymer" and that Eckberg et al do not teach adding an alkylphenol compound. Desorcie et al disclose analogous compositions comprising an epoxysilicone, a polyarylonium salt and a compatibilizer, wherein the compatibilizer is a mixture of an alkylphenol and an alkane diol.

It would have been obvious to one skilled in the art at the time of the invention to employ an epoxy-terminated silicone polymer from those taught by Eckberg et al wherein "y" is a positive integer up to 22, and having substantially no epoxy groups (D^{E}) in the backbone of the epoxy functional silicone, as shown in the epoxy silicone disclosed in column 20, line 53 and used in the compositions in Table 12. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of providing a useful release composition selected from the compositions disclosed by

Eckberg et al. Eckberg et al provide motivation by teaching that the epoxy silicone having the formula $M^ED_{25}M^E$ provides a tight and zippy release and that the addition of the silicone carbinol eliminates the zippy character of the tight release rendering the release properties both tight and smooth. One of ordinary skill in the art at the time of the invention would have expected to control the crosslinking in the product by omitting epoxy functionality along the silicone backbone and providing only epoxy end groups for crosslinking. The features of the dependent claims are found within the disclosure of Eckberg et al. See US 4,279,717 and US 5,360,833, incorporated by reference to teach epoxy silicones, column 12, lines 57-66, and Tables 2, 7, 11 and 12. For example, US 5,360,833 discloses low molecular weight silicones terminated with epoxy groups, such as the silicone in Example 4, and teaches that the material is an extremely reactive diepoxy monomer. There is no comparative evidence of record to show that selection of epoxy-terminated silicones wherein the repeating number of dimethylsilicone units is from 1 to 22 and there are no epoxy units along the backbone instead of the disclosed $M^ED_{25}M^E$ produces unexpected results in the instantly claimed invention.

It would have been obvious to one skilled in the art at the time of the invention to employ the compatibilizer for an epoxy silicone and iodonium salt comprising an alkylphenol disclosed by Desorcie et al in the compositions comprising epoxy silicones and iodonium salts disclosed by Eckberg et al. One of ordinary skill in the art at the time of the invention would have been motivated by an expectation of providing substantially uniform epoxysilicone compositions, as taught by Desorcie et al.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing

date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W. Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Susan Berman

SB
5/11/06

Susan W Berman
Primary Examiner
Art Unit 1711